CLAIMS

What is claimed is:

1. A method of allocating bandwidth to a plurality of programs, each of said programs corresponding to one of a plurality of categories, said method comprising the steps of:

selecting specific programs received from television programming sources;

allocating a segment of the bandwidth to the specifically selected programs; and

continuing said allocating step with additional selected programs until at least one of the following conditions occurs:

all of said programs are allocated,

all of said bandwidth is allocated.

2. The method of claim 1, wherein the step of allocating includes dynamically changing the bandwidth allocation over time.

3. The method of claim 1, wherein the step of selecting uses an algorithm to select specific programs based on each programs' bandwidth requirement.

4. The method of claim 1, wherein the step of selecting uses an algorithm to select specific programs based on buy rates of the programs.

5. The method of claim 4, wherein the step of selecting uses an algorithm to select specific programs based on each programs' length.

6. The method of claim 1, wherein the step of selecting uses an algorithm to select specific programs based on programs watched information.

7. The method of claim 1, wherein the step of selecting uses an algorithm to select specific programs based on marketing information.

8. A method of allocating bandwidth to a plurality of programs, each of said programs corresponding to one of a plurality of categories, said method comprising the steps of:

prioritizing each of said programs by assigning to each of said programs one of a plurality of priority levels, said plurality of priority levels including a high priority level and progressively lower priority levels;

dividing said bandwidth so that each program category receives a segment of said bandwidth;

allocating a portion of said segments of bandwidth to high priority level programs in each category; and

continuing said allocating step with progressively lower priority levels programs until at least one of the following conditions occurs:

all of said programs are allocated,

all of said bandwidth is allocated.

9. The method of claim 8, wherein the step of allocating includes dynamically changing the bandwidth allocation over time.

10. The method of claim 8, wherein the step of prioritizing uses an algorithm to weigh programs watched information when determining a program's priority.

11. The method of claim 8, wherein the step of prioritizing uses an algorithm to weigh marketing information when determining a program's priority.

12. The method of claim 8, wherein the high priority level corresponds to programs included in one cable television service and a lower priority level corresponds to programs included in a different cable television service.

13. The method of claim 8, wherein each priority level includes a different set of programs from a variety of categories, and wherein the high priority level includes a first finite number of programs from each of the plurality of categories and a lower priority level includes a second finite number of different programs from each of the plurality of categories.

14. The method of claim 8, wherein the high priority level corresponds to cable television programs and a lower priority level corresponds to pay-per-view programs.

15. The method of claim 14, wherein an even lower priority level corresponds to high definition television programs.

16. The method of claim 8, wherein the high priority level corresponds to sports-related television programs and a lower priority level corresponds to news-related television programs.

17. The method of claim 16, wherein an even lower priority level corresponds to documentaries.

18. A method of transmitting a plurality of programs to a cable headend, each of said plurality of programs corresponding to one of a plurality of categories, said method comprising the steps of:

prioritizing each of said programs by assigning to each of said programs one of a plurality of priority levels, said plurality of priority levels including a high priority level and progressively lower priority levels;

forming a plurality of signals, each of said signals comprising programs corresponding to a single priority level;

appending a header to each of said signals, wherein said header identifies said priority level for a corresponding signal, thereby enabling recognition by said cable headend;

dividing bandwidth so that each program category receives a segment of said bandwidth;

allocating a portion of said segments of bandwidth to signals comprising high priority level programs in each category;

continuing said allocating step with signals comprising progressively lower priority level programs until at least one of the following conditions occurs:

all of the signals are allocated; and

all of said bandwidth is allocated; and

transmitting each of said headers and said corresponding signals to said cable headend.

19. The method of claim 18, further comprising the steps of:

digitizing each of said headers and said corresponding signals into digitized signals;

compressing the digitized signals into compressed signals; and

combining the compressed signals with a program information signal.

20. The method of claim 18, wherein the high priority level corresponds to programs included in a cable television service and a lower priority level corresponds to programs included in a different cable television service.

21. The method of claim 18, wherein each priority level includes a different set of programs from a variety of categories, and wherein the first priority level includes a first finite number of programs from each of the plurality of categories and the second priority level includes a second finite number of remaining programs from each of the plurality of categories.

22. The method of claim 18, wherein the high priority level corresponds to cable television programs and a lower priority level corresponds to pay-per-view programs.

23. The method of claim 18, wherein the high priority level corresponds to sports-related television programs and a lower priority level corresponds to news-related television programs.

24. The method of claim 18, wherein the high priority level corresponds to television programs available during a specified period of time and a lower priority level corresponds to television programs available during a different period of time.

25. A method of transmitting programs to a plurality of transponders, said method comprising the steps of:

prioritizing each of said programs by assigning to each of said programs one of a plurality of priority levels, said plurality of priority levels including a high priority level and progressively lower priority levels;

forming a plurality of signals, each of said signals comprising programs corresponding to a single priority level;

allocating a portion of bandwidth to signals comprising high priority level programs;

continuing said allocating step with signals comprising progressively lower priority level programs until at least one of the following conditions occurs:

all of the signals are allocated; and

all of said bandwidth is allocated; and

transmitting said plurality of signals to said plurality of transponders so that none of said transponders receives more than one of said signals.

26. The method of claim 25, further comprising the steps of:

digitizing each of said headers and said corresponding signals into digitized signals;

compressing the digitized signals into compressed signals; and

combining the compressed signals with a program information signal.

27. The method of claim 25 further comprising the step of dynamically changing bandwidth allocation for at least one of said ~~signals~~.

28. The method of claim 25 further comprising the step of appending a header to each of said signals, wherein said header identifies said priority level for a corresponding signal, thereby enabling recognition by said transponder.

29. The method of claim 28, further comprising the steps of:

digitizing each of said headers and said corresponding signals into digitized signals;

compressing the digitized signals into compressed signals; and

combining the compressed signals with a program information signal.

30. The method of claim 28 further comprising the step of dynamically changing bandwidth allocation for at least one of said signals.

31. A method of transmitting a plurality of programs in a first amount of bandwidth for reception by a first cable headend, and in a second amount of bandwidth for a second cable headend, said method comprising the steps of:

prioritizing each of said programs by assigning to each of said programs one of a plurality of priority levels, said plurality of priority levels including a high priority level and progressively lower priority levels;

allocating said first amount of bandwidth to high priority level programs in each category;

continuing said first amount of bandwidth allocation step with said progressively lower priority level programs until at least one of the following conditions occurs:

all of the programs are allocated;

all of said first amount of bandwidth is allocated;

allocating said second amount of bandwidth to high priority level programs in each category;

continuing said second amount of bandwidth allocation step with said progressively lower priority level programs until at least one of the following conditions occurs:

all of the programs are allocated;

all of said second amount of bandwidth is allocated;

transmitting the programs in said first amount of bandwidth to said first cable headend; and

transmitting the programs in said second amount of bandwidth to said second cable headend.